

WHAT IS CLAIMED IS:

1. A method of removing contamination from a Fischer-Tropsch derived
5 hydrocarbon stream, the method comprising:
 - a) filtering a Fisher-Tropsch derived hydrocarbon stream to produce a filtered hydrocarbon stream;
 - b) passing the filtered hydrocarbon stream to a catalytic filtering zone, the catalytic filtering zone containing a catalyst comprising at least one metal selected from
10 the group consisting of Group VI and Group VIII elements at conditions sufficient to remove at least a portion of the contamination from the filtered hydrocarbon stream, thus forming a purified hydrocarbon stream;
 - c) passing the purified hydrocarbon stream to a hydroprocessing zone; and
 - d) recovering at least one fuel product from the hydroprocessing zone.
- 15 2. The method of claim 1, wherein the temperature of the hydroprocessing zone is less than the temperature of the catalytic filtering zone.
3. The method of claim 2, further comprising the step of cooling the purified
20 hydrocarbon stream to produce a purified and cooled hydrocarbon stream, and passing the purified and cooled hydrocarbon stream to the hydroprocessing zone.
4. The method of claim 1, wherein the contamination comprises an inorganic component selected from the group consisting of Al, Co, Ti, Fe, Mo, Na, Zn, Si, and Sn.
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5. The method of claim 4, wherein the contamination originates from upstream processing equipment.
6. The method of claim 4, wherein the contamination originates from a catalyst used
30 to produce the Fischer-Tropsch derived hydrocarbon stream.

7. The method of claim 4, wherein the size of the contamination is such that the contamination may be passed through a 1.0 micron filter.

8. The method of claim 1, wherein the catalyst has a peak pore diameter greater than about 165 angstroms as measured by mercury porosimetry, and an average mesopore diameter greater than about 160 angstroms.

9. The method of claim 1, wherein the catalyst further comprises a refractory oxide base selected from the group consisting of alumina and silica.

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10. The method of claim 1, wherein the Group VI metal is selected from the group consisting of chromium, molybdenum, and tungsten, and the Group VIII metal is selected from the group consisting of iron, cobalt, nickel, ruthenium, rhodium, palladium, osmium, iridium, and platinum.

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11. The method of claim 1, wherein the catalyst is configured as a hollow cylinder having an inside surface coated with the at least one Group VI or Group VIII metal.

12. The method of claim 1, wherein the catalytic filtering zone is maintained at a temperature greater than about 450°F.

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13. The method of claim 12, wherein the catalytic filtering zone is maintained at a temperature greater than about 700°F.

14. The method of claim 1, wherein the catalytic filtering zone is maintained with a hydrogen-containing atmosphere having a pressure of greater than about 500 psig.

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15. The method of claim 1, wherein the catalytic filtering zone and the hydroprocessing zone are configured to reside within a single reactor.

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16. The method of claim 1, further including an acid treatment step that comprises contacting the filtered hydrocarbon stream with an aqueous acidic stream to form a

mixed stream, and then separating the mixed stream into at least one treated hydrocarbon stream and at least one spent aqueous acidic stream.

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17. The method of claim 16, wherein the acid treatment step is a batch process.
18. The method of claim 16, wherein the acid treatment step is a continuous process.
19. The method of claim 16, wherein the aqueous acid stream comprises an acid dissolved in water, the concentration of the acid in the water ranging from about 0.01 to
10 1.0 M.
20. The method of claim 16, wherein the acid used in the acid extraction step is selected from the group consisting of hydrochloric acid, sulfuric acid, nitric acid, formic acid, acetic acid, propionic acid, butyric acid, oxalic acid, and Fischer-Tropsch derived
15 reaction water.